猜想智能电车 诠释电车文明
Intelligent EV and EV Civilization
——乔布斯的iCar梦想
– iCar: Jobs’s dream

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汽车是高级消费品，是富裕社会的日常生活用具。随着科技进步和生产力提高，汽车生产成本将不断降低，普及率必将不断提高。世界人均汽车拥有率的前三名是：美国1.3人/辆，加拿大1.6人/辆，日本1.9人/辆；中国则是14人拥有一辆车。中国全面建成小康社会之后，一旦敲开富裕社会的大门，汽车市场必将成为最大的消费市场。中国汽

Car is a living tool which expensive, like a house. But with scientific and technological progress and productivity improvement, car production costs are lower and its penetration is growing. 1 car is possessed per average 1.3 people in the United States, 1.6 people in Canada, 1.9 people in Japan, and 14 people in China. With the improving of the Internet technology, car-network technology application and popularization, the automobile market will become

车行业必将面临一场智能革命，创新智能电车，扬弃传统汽车，建设电车文明，颠覆汽车文明。这是不以人们的意志为转移的。

乔布斯生前的iCar梦想，为我们猜想智能电车和诠释电车文明提供了一个标本。不胜感概系之！

乔布斯的梦想——iCar

乔布斯来到世界，仿佛是为了办一件事：颠覆。就像Lisa和Mac在Dos时代的标新立异；iPod出现彻底改变音乐产业，Walkman和便携CD播放器被迫退出了历史舞台；当全球移动通讯设备被诺基亚、摩托罗拉及黑莓三分天下时，iPhone的出现又重新诠释了手机概念；当微软和英特尔试图打造Windows平板电脑和超极本帝国时，iPad再一次打破了游戏规则，让人们找到了新的出路……

乔布斯领导的“苹果帝国”自成立以来打败了许多对手，乔布斯还有一个更大的梦想---打造一款颠覆传概念的电车——iCar。乔布斯的iCar是一款全新的移动电脑，再加上四个轮子而已！

the largest market. On the other hand, the auto industry will face a huge revolution.

ICar is Jobs' s dream. This is a sample for us to describe the intelligent EV and EV civilization. We have much thougth!

Jobs's dream – iCar

Jobs lived as if is for the sake of one thing: subversion.Like Lisa and Mac in the Dos era, he pursued novelty. IPod radically changed the music industry, which forced Walkman and portable CD player to withdraw from the stage of history. When the global mobile communications equipment industry was gripped by Nokia, MOTOROLA, Blackberry, he delivered iPhone which re-defined the mobile phone. When Microsoft and Intel tried to build the empire of Windows tablets and so forth, iPad broke the rules of the game letting the users find a new way...

Tesla's success today is only the tip of the iceberg in Jobs' car empire. He would make a global car market layout using his disruptive thinking in Internet. His dream is to create a concept car, i.e. iCar as a subversion to the traditional car. In Jobs' mind, iCar is a new mobile computer plus four wheels.

In 2014, the most stylish car is the car manufactured by Tesla in the United States -- Tesla Model S. A new generation of electric luxury car Tesla Model S is a new concept car. If Jobs were still alive, he would scoff at this car.

If Jobs is still alive, he would adopt a strategy to rapidly enter the car industry. He would make a global car market layout using his disruptive thinking in Internet. That is, he would build his unique "Apple Car" -- iCar.

ICar: "symbiosis" of the car and the road

ICar control interface and wind screen will use Apple' s retina display panel, the most advanced artificial intelligent traffic system and intelligent road map. The background large databases are linked with local traffic administration databases for the real-time traffic information transfer. Therefore, it is smart and automatic in driving, and is even unmanned.

When you get in it, then it will be in standby state. When you tell your destination, the car will take you there. It will adopt the flight mode in the case of traffic congestion or will become a yacht in the case of pit water. The car can go forward and backward. It is controlled flexibly. The user will not need any drive license. iCar will close all of the driving schools.

美国特斯拉公司生产的TeslaModelS，被认为是2014年真土豪最拉风的全新概念电动汽车，假若乔布斯还活着，一定会嗤之以鼻。特斯拉的成功其实只是显露出乔布斯电车梦的冰山一角、微不足道。

乔布斯为进军电车产业，一定会采取“插位战略”，利用互联网的颠覆性思维布局全球电车市场，牢牢占据这一领域的霸主地位，打造独一无二的“苹果电车”——iCar。

iCar：“车路共生”的代步工具

ICar的操纵界面及挡风显示屏将采用苹果公司视网膜显示面板，搭载最先进的iCar人工智能行车系统和苹果智能行车地图，与后台大型数据库和当地交管部门数据库相联接，实时传送路况信息，真正实现智能自动驾驶甚至无人驾驶。

你坐上车的一刹那，车子就处于待命状态，你说出目的地，iCar可自行选择最佳路况线路；遇上堵车，就按飞行模式，遇上积水便变成游艇；把你送达目的地，会自动寻找最佳停车位置，泊车入库。

真正实践了电车文明“车路共生”的工程哲学。

iCar：“人车一体”的智能技术

乔布斯iCar的造车理念不同于传统简单粗犷地将人塞进交通工具的造车理念，而是打造一款完美契合人类行走习惯的交通工具，并且彻底推翻传统的汽车概念。它不仅要够酷，够智能，还要使人类彻底摆脱传统汽车的束缚。

iCar没有方向盘，没有脚踏板，没有打火装置，没有空调按钮，一切繁琐复杂的按键都荡然无存，车前只剩下360度视野的显示屏及两排智能座椅。车轮是万向轮，电车不仅可以前进后退，还可以平行滑动，360度转圈，灵便自如。iCar将人类的四肢从方向盘和脚踏板中彻底解放了出来。

This reflect the engineering philosophy of "symbiosis" between the car and the road .

ICar: smart technology brings convenience for users

Different from traditional cars, Jobs's philosophy is to build a perfect car perfectly fitting human habits and completely overturn the traditional concept of car. It should be cool and smart and can make the human to thoroughly get rid of the bondage of traditional automobile.

ICar has no steering wheel, pedals, lighter device, and air conditioning button. All the complex keys are gone. Jobs' iCar will let human limbs get rid of the steering wheels and pedals. ICar will be the first to be able to realize intelligent automatic driving. It only has the 360-degree vision display screen and the intelligent seats in two rows.

From Mac to iPhone, Apple's each product can be an artistic piece in in the technical field. In addition to the design, they always can provide us with a substantial problem solution. iCar is no exception. Besides Humanized intelligence as one aspect in pursuit of perfection, its solution in the traffic can truly bring human values. This smart technology really brings the convenience for users.

ICar: smart driver cab

In the iCar, the dialogue between it and people is a classic interaction which improves consumption experience, so being really smart and cool enough. Moreover, it is called by Jobs as a manned mobile Internet terminal.

We don't have to worry about how to operate. The iCar adopts a disruptive innovation technology: artificial intelligent voice control system. ICar carries the IOS artificial intelligence system and the Siri voice recognition system. The interactive experience is unprecedented. IOS intelligent artificial system seems to have a brain and become your chauffeur, which is responsive, accurate, and absolutely loyal.

When you sit in the cab, then the system will automatically start all the procedures in iCar. As long as you tell your need, then the artificial intelligence system will be like a family housekeeper to offer service for you. For example, when you want to go to the nearby restaurant and what you have to do is tell the restaurant's name and number of eaters, then iCar will help you to complete online room reservation and unload the menu to the on-board display. When you complete the ordering, then iCar may have sent

从第一代Mac到今天的iPhone5S，苹果的每一款产品都可算得上是科技领域的艺术品，除了酷炫的设计之外，乔帮主也总能为我们提供实质性的问题解决方案，iCar也不例外。如果三岁的小孩能够弄玩具，那么就可以像玩iPad一样开车，再也用不着考驾照、背交通规则，驾校也因之而全部倒闭。

真正应用了电车文明“人车一体”的智能技术。

iCar：“人车共生”的智能座驾

iCar的人车对话是增加的一项经典互动，提升消费体验的设计，确实够智能而且够酷，但仅仅如此还不能满足乔帮主追求极致的脚步。iCar被称作可载人的移动互联网终端不只是徒有虚名。

我们无须担心如何操控，有iCar颠覆性的创新科技——人工智能语音控制系统。iCar搭载最新研发的IOS人工智能系统和Siri语音识别功能，让你体验到到史无前例的人车互动感受。IOS智能人工系统仿佛长出了脑子，变成了你的“私人司机”，有求必应，准确无误，而且绝对忠诚。

当你坐进驾驶室时，系统就会自动启动iCar的所有程序，只要说出你的需求，人工智能系统就会像家庭管家一样全程为你提供服务。你想去附近的餐厅，你要做的只是说出餐厅的名字和就餐人数，iCar便会帮你完成网上房间预订并且将菜单上传至车载显示屏；在你点菜完成时，说不定iCar已经载你出现在这家餐厅门口了。要是去剧院，那将是另一番景象……

真正加载了电车文明“人车共生”的系统理念。

iCar：“车路共荣”的两栖动车

人性化的智能内置不是乔布斯所追求的极致，对交通拥堵问题的解决方案才能真正带给人类价值。

随着电车保有量的不断上升，交通拥堵已经成为有车一族的共同烦恼，而且这一问题大大限制未来电车的发展，人们需要一种新型的日常代步工具解决交通拥堵问题。乔布斯带来的新答案：陆空两栖智能电车——iCar。它将使人们的日常交通方式由二维平面的“道路”跨越至三维空间的“航线”——地上不通、飞升天空。

在乔布斯的眼里，没有什么能够阻挡苹果电车的脚步。iCar将配有车载直升飞行器，按键启动“飞行模式”，就可将你的电车瞬间变为小型直升机，驶入三维空

you at the door of the restaurant...

This really reflects the system concept of "symbiosis" between the car and the people.

ICar: amphibious car with a concept of co-prosperity between the car and the road

For Jobs, iCar is no exception. Besides Humanized intelligence as one aspect in pursuit of perfection, its solution in the traffic can truly bring human values.

Along with the rising of car ownership, traffic congestion has become the trouble for the most motorists. This problem will greatly limit the development of the future cars. The people need to have a new type of daily transport means to solve the problem of traffic congestion. Jobs hoped to bring the new answer: a air-ground amphibious smart car – iCar. It will make our daily transportation to enter three dimensional space.

In the eyes of Steve Jobs, nothing can stop the footsteps of Apple car. ICar will be equipped with a helicopter aircraft, making you to be free from worry about traffic jam. "Flight mode" can let your car instantly become a small helicopter into the air track, thoroughly getting rid of the traffic jam. The flight system does not need any large airfield runway, instead, a small roof parking space can be available. Relevant facilities are expected to be constructed. Our human life would be into the era of 3 dimensions.

Through this, we truly achieve amphibious transportation.

iCar: Mobile terminal

ICar will be the first driverless smart car which integrates with the Internet thinking. It can be regarded as a manned Internet mobile terminal. Jobs' the concept of the mobile computer plus four wheels may be the core concept of EV civilization.

Equipped with intelligent automatic driving, iCar can liberate the

间“航线”，彻底摆脱在二维平面“道路”拥堵的烦恼，使你再也不用担心遭遇堵车。而且飞行系统无需跑道及大型停机坪，一个小小的楼顶停车位即可容纳。届时相应的空中充电站及空中快餐厅等配套设施也将陆续建成，人类生活将进入三维立体空间时代。

真正实现了电车文明“车路共荣”的两栖交通。

iCar：“天人合一”的移动终端

iCar将是第一台能够真正实现智能自动驾驶的电车，融合了互联网思维的iCar与其说是智能电车，更应该看作是一台可载人的互联网移动终端。乔布斯的“移动电脑再加上四个轮子”的概念或许是电车文明的核心概念。

配备智能自动驾驶的iCar在解放了人类四肢的同时，却没有解放人们的思维。因为乔布斯深谙人性的缺陷：人的欲望是无止境的，而且没有人喜欢寂寞，哪怕是在路上短短的几十分钟，也不能虚度光阴。于是，他又搭上了另一大电车消费内容——车联网。

搭载有高速网络及最先进的苹果电脑系统的iCar，将通过车联网技术使人们随时随地在车中与世界保持同步，真正做到行走、学习、办公、娱乐及休闲于一体，使iCar变成一间移动互联网工作室。

系统通过对你的面部表情、心率血压及身体温度的检测，可准确地判断你的情绪及心理波动，并主动采取解决措施。例如当检测出你的情绪低落时，会自动将车内灯光亮度调低，并播放一些舒缓压力的歌曲；而当检测出你情绪兴奋时，系统也会将灯光调制合适的色调，并配合轻松活泼的音乐；还能真正做到“行万里路，读万卷书”两不误的惬意。

真正体验到电车文明“天人合一”的人文境界。

iCar：“私人定制”的人性时代

乔布斯的理念是破坏性创造，颠覆性创新，搭配上他追求完美力求极致的个性，足以摧毁传统电车的所有理念。所以，一切传统电车的影子都不会出现在iCar之上。

乔布斯的营销布局，也不只停留在简单的O2O或者B2C，而是进入了C2B的“私人定制”时代。iCar支持针对所有用户的私人定制版块。届时苹果官网将推出在线选择定制只属于你自己的iCar，用户可利用互联网在线定制，自主搭配电车零部件和电车外观设计，你将拥有只属于你

human limb and mind. Jobs understood the defects of human nature: people's desire is endless, and there is no people liking loneliness. This new car is linked to Internet.

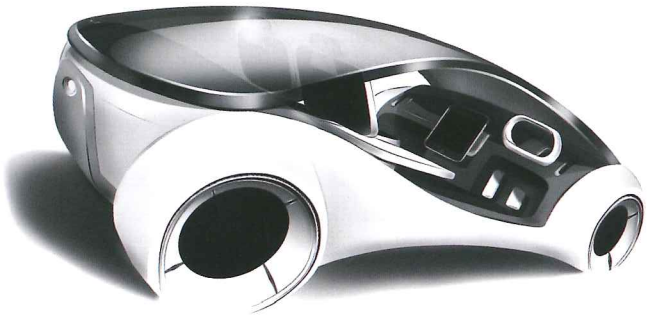
With high-speed networking and the most advanced computer system, iCar can make people anytime and anywhere to be sync with the world and integrate the learning, working, entertainment, and leisure as a whole. In fact, iCar is a mobile Internet studio.

Through the detection to your facial expression, heart rate, blood pressure and body temperature, the system can accurately determine your emotional and psychological fluctuations and take the initiative to adopt measures to solve. For example, when the system finds that you are in a low mood, then it will automatically adjust the car light' s brightness down and play some songs to relieve pressure; and when you are emotionally excited, then the system will also modulate the light tone and play the suitable music. Therefore, we will truly experience the cultural nature-man harmony.

ICar: private custom and humanity

Jobs's idea is creatively destructive. He pursued the perfection and extreme personality, and this was enough to destroy all the concepts in the traditional car. So, the new car will be completely different from a conventional car.

Jobs's marketing layout is not only stay in simple O2O or B2C, but



also enteres the C2B era of "private custom". ICar supports the custom design for all users. Apple's official website will launch online choice which can customize your iCar. Users can do the online customization through the Internet, including collocation of auto parts and auto appearance design. You will have your own iCar. Of course, if you feel difficult in choice, then the famous Italian designer will help you design it.

Artificial intelligence is essentially human intelligence. The most important is that this is embodied in the detail control and humanized design. In order to provide more technical content, Jobs let the multi-screen interactive technology into the design concept of iCar, making it perfectly synchronous and interactive with other Apple products. You only need to gently drag the screen

的iCar。如果你有“选择困难症”，那么也可采用由著名意大利汽车设计师设计的整车配套方案。

人工智能本质上是“人性智能”，最重要的是体现在对细节的把控及人性化的设计。为了进一步掌控人们的科技生活，乔布斯将多屏互动技术移植到iCar的设计理念中，使其与其他苹果产品达到完美同步及互动，你只需轻轻滑动车载显示屏上的内容，就可将其拖至你的移动平板电脑或iPone手机上；如果你想要体验手动驾驶iCar时，平板电脑还可通过车内局域网，瞬间变身为电车方向盘，让你感受亲自驾驶的快感。

乔布斯的汽车帝国不只是简单的生产销售市场，iCar的普及将使苹果公司成为世界第一大汽车数据运营商，掌控全球的汽车数据。在一套完整的资源系统整合之后，这将会成为一套涵盖整个汽车后市场的智能系统。电车维修、保养、保险及售后服务将被整合入苹果车载智能系统，通过车联网随时随地与电车服务中心相连接，系统也会自动检测车况信息，及时为车主推送和提供电车后市场服务信息，让你“足不出车”就可完成一切电车维护。

终于进入了电车文明“私人定制”的人性时代！

上帝带走了乔布斯，留下了iCar！人们无法了解iCar，只能猜想iCar。本文仅是一个“猜想”方案，或许只有上帝才能解开乔布斯的iCar之谜！

人们猜想，如果乔布斯还活着，“移动电脑再加上四个轮子”的理论一旦付诸实践，那么就不仅是美国三大汽车公司濒临破产，而且就将是世界汽车产业全面崩盘。创新电车，扬弃汽车，电车文明就将在汽车文明的废墟上建立起来。

【参考文献】李光斗：《智能汽车终极猜想：电动汽车与特斯拉的“噩梦”？》

content into your mobile tablet PC or iphone. The tablet computer can also be through the LAN to become a car steering wheel, letting you feel the driving pleasure.

Jobs's car empire is not just in a simple car sales market. The popularity of iCar will make the company become the world's largest auto data carrier to possess the global car data. After a complete set of resources system integrated, this will result in a intelligent system covering the entire car market. The vehicle's maintenance and repair, insurance, and after-sales service will be integrated into Apple's vehicle intelligent system. At anytime and anywhere, it is through Internet to connect with the car service center. The system will automatically detect car information and promptly give the car owner service information. As such, you can easily complete all vehicle maintenance.

This is a "private custom" era.

God took away jobs, leaving the guess from millions of people on Apple iCar. Perhaps only God can know the mystery of Jobs' iCar.

We guess, if Jobs were still alive and once his concept of the mobile computer plus four wheels goes into practice, then we may see one thing: The major car companies in the world on the verge of bankruptcy. THe electric cars are expected to be a common thing in the future..

Reference:

Li Guangdou. iCar – Jobs' Smart Car: the nightmare for the electric car and Tesla?

谷歌新车颠覆传统 引爆无人驾驶革命

Google Car overturns The Tradition: unmanned Driving revolution

文/ 车开慧 Text/Che Kaihui

没有传统刹车踏板、方向盘，甚至是任何其他踏板，只需要一个按钮操作。随着谷歌公布其最新版的无人驾驶汽车，美国公共交通和物流领域的“无人化”驾驶进程又向前推进了一步。毫无疑问，伴随生产和使用成本持续下降，安全性能的提高，大量常规的无人交通工具未来将陆续出现。

谷歌最新“无人驾驶”汽车

相比于以往的无人驾驶车型和传统汽车，谷歌这款无人驾驶汽车作出了颠覆性的改变：去掉了包括驾驶盘、刹车踏板以及加速踏板等在内的诸多重要元件，完全通过传感器和车载电脑上的软件系统来进行操控。

自2009年至今,谷歌已经累计进行了70万英里的高速公路和城市街道测试。但此前的车型一直无法摆脱人为干预，每次上路行驶都需要两名随时准备接管车子的谷歌员工密切监控。

而最新亮相的新车型已经完全摆脱驾驶员操控，只需传

Traditional brake pedal, steering wheel, even the any other pedal do not exist, and there is only one button for operation. This is a feature in the the latest version driverless car released by Google. This means that the unmanned driving process takes one step further in the pubic traffic and logistics in the United States. There is no doubt that, with the production and use costs continuously dropping and safety performance improved, a large number of conventional unmanned-driven vehicles will appear in the future.

Google's latest driverless car

Compared to the previous driverless and traditional vehicles, Google's self-driving car makes a disruptive change: not requiring the steering wheel, brake pedal, accelerator pedal, and other important components. It is entirely controlled by the sensor and the on-board computer software system.

Since 2009, Google has 700000 miles of highway and city street

感器和车载电脑上的软件系统来进行操控。它在车顶上的扫描器发射64束激光射线，激光碰到车辆周围的物体，又反射回来，这样就计算出了物体的距离。另一套在底部的系统测量出车辆在三个方向上的加速度、角速度等数据，然后再结合GPS数据计算出车辆的位置，所有这些数据与车载摄像机捕获的图像一起输入计算机，电脑以极高的速度处理这些数据。这突显科技谷歌强大的数据处理能力。

这款新型无人驾驶汽车能容纳两名乘客。软件和传感器会负责所有的工作，用户只需按下按钮，汽车即可把他们送到的目的地。谷歌计划跟底特律车厂合作，在短期生产100到200辆无人驾驶汽车，并希望在未来几年内能在更多城市推广。

科技巨头纷纷布局无人驾驶

在汽车无人驾驶技术的研发上，丰田、奔驰、沃尔沃、通用等传统车企早已有所行动，但更引人注目的是，能够为智能汽车提供“大脑”的科技巨头们也在积极参与相关的项目运作，其中不乏英特尔、高通等IT巨头。

5月初，英特尔投资公司宣布投资日本无人驾驶技术开发商ZMP。ZMP成立于2001年，致力于研发并提供包括汽车智能平台、各类传感系统、可视化及分析、技术咨询、实地测试及车联网信息系统等在内的无人驾驶技术。

几乎同一时间，诺基亚宣布启动价值1亿美元的车联网基金，并委托诺基亚成长基金专门管理，主要投资对象是具有发展潜力的车联网技术、智能汽车技术和互联网本地服务类的公司。去年9月，诺基亚曾表示将与奔驰共同开发无人驾驶汽车。

科技巨头在无人驾驶技术方面的布局昭示着汽车已成为当下全球创新的重要一环。汽车创新发展的终极目标是实现彻底的无人驾驶。

随着生产和使用成本持续下降，以及安全性能不断提高，大量常规的无人交通工具出现。未来十年“无人驾驶革命”将创造巨大价值。

tests. But in previous models, the cars were unable to get rid of the intervention from the humans. Every time on the road, two employees of Google were required to do the close monitoring during the driving. The latest model has completely gotten rid of the driver. Instead, it just needs the sensor and the on-board computer software system for operation. The scanner on its top can emit 64 beams of laser rays. When rays encounter the object around the vehicle. As such, the distance of the object can be calculated. Another set of system at the bottom in the vehicle can measure the acceleration and angular velocity and other data of the car in three directions. Then, combined with the GPS data, the position of the vehicle is calculated. All these data and images captured by the on-board camera are input in the computer which can process these data with a high speed. This highlights the strong data processing ability from Google technology.
The new driverless car can hold two passengers. Software and sensors will be responsible for all the work. The users only need to press the button. As such, the car can take them to their destination.
Google plans to work with the Detroit automaker for the short-term production of 100 to 200 driverless cars. It hopes to promote them in more cities in the coming years.

Tech giants have the layout in driverless cars

In car self-driving technology research and development, Toyota, Mercedes Benz, Volvo, GM and other traditional automakers have their action. More notably, technical giants able to provide the "brain" with the smart car also actively participate in related projects, including Intel, Qualcomm and other IT giants.

Early May, Intel Investment Company announced to invest ZMP as a self-driving technology developer in Japan. ZMP, founded in 2001, is committed to research and development and provision of automobile intelligence platforms, including various sensing systems, visualization and analysis systems, field test and vehicle-network information systems and other driverless technologies.

Almost at the same time, Nokia announced the launch $100 million fund for car- Internet and entrust Nokia Growth Fund in special management. The main investment object is a company which is engaged in car-networking technology, intelligent vehicle technology and the Internet local service etc. Last September, Nokia said it would develop the driverless cars through the cooperation with Mercedes-Benz.

Technology giants make their layout in the driverless technology. This marks that the car has become an important part of current global innovation. Car’s ultimate goal in innovative development is that a car is able to be completely driverless.

with the production and use costs continuously dropping and safety performance improved, a large number of conventional unmanned-driven vehicles will appear in the future. In the next decade, the driverless revolution will create enormous values.